

**Notice of Allowability**

Application No.

09/964,739

Examiner

Sow-Fun Hon

Applicant(s)

KIM, WOONG KWON

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to interview dated 03/17/05.
2. ☒ The allowed claim(s) is/are 1,3,5-7,9,11,13-15 renumbered 1,2,3-5,6,7,8-10.
3. ☒ The drawings filed on 28 September 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 3/28/05.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mary Jane Boswell on March 17, 2005.

The application has been amended as follows:

2. Cancel claims 8, 16-17, 20-22.
3. Substitute claim 1 with - - A liquid crystal display device, comprising: a first thin glass substrate and a second thin glass substrate coupled with the first thin glass substrate, each thin glass substrate having a thickness of less than 0.7 mm, at least one of the first and second thin glass substrates having a chemically etched outer surface; and at least one transparent protective layer formed on the chemically etched outer surface of at least one of the first thin glass substrate and the second thin glass substrate, wherein the protective layer has a compressive stress provided on the chemically etched outer surface of at least one of the first thin glass substrate and the second thin glass substrate, to prevent cracks which occur in glass due to an external impact. - -
4. Substitute claim 5 with - - The liquid crystal display device according to claim 1, wherein the protective layer includes one inorganic layer and one organic layer. - -
5. Substitute claim 9 with - - A liquid crystal display device, comprising: a first thin glass substrate and a second thin glass substrate coupled with the first thin glass substrate, each thin

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glass substrate having a thickness of less than 0.7 mm, at least one of the first and second thin glass substrates having a chemically etched outer surface; and at least one transparent protective layer formed on the chemically etched outer surface of at least one of the first thin glass substrate and the second thin glass substrate, wherein the protective layer has a compressive stress provided on the chemically etched outer surface of at least one of the first thin glass substrate and the second thin glass substrate, to prevent cracks which occur in glass due to an external impact; a transparent electrode formed on an inner surface of the first thin glass substrate or the second thin glass substrate; an alignment layer formed on the transparent electrode; and a liquid crystal layer between the first thin glass substrate and the second thin glass substrate. - -

6. Substitute claim 13 with - - The liquid crystal display device according to claim 9, wherein the protective layer includes at least one inorganic layer and at least one organic layer.

7. Specification, Page 1: Below heading "Background of the Invention", insert - This application is a division of application no. 08/954,124, filed 10/20/1997, now patent no.

6,327,011. - -

8. The following is an examiner's statement of reasons for allowance: The closest cited prior art of record, US 6,654,057 fails to teach or suggest, even in combination with US 5,637,353, a liquid crystal display device, comprising: a first thin glass substrate and a second thin glass substrate coupled with the first thin glass substrate, each thin glass substrate having a thickness of less than 0.7 mm, at least one of the first and second thin glass substrates having a chemically etched outer surface; and at least one transparent protective layer formed on the chemically etched outer surface of at least one of the first thin glass substrate and the second thin

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glass substrate, wherein the protective layer has a compressive stress provided on the chemically etched outer surface of at least one of the first thin glass substrate and the second thin glass substrate, to prevent cracks which occur in glass due to an external impact. Both references fail to teach a protective layer which has a compressive stress provided on the chemically etched outer surface of a thin glass substrate having a thickness of less than 0.7 mm.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (571)272-1492. The examiner can normally be reached Monday to Friday from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (571)272-1498. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*S. Hon*

Sow-Fun Hon

03/31/05

*[Signature]*  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
1772

4/1/05